PERFORMANCE ANALYSIS OF BANKS HEADQUARTERED IN HOLLYWOOD VERSUS SILICON VALLEY

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ABSTRACT

In this study we examine the performance of banks headquartered in Hollywood and banks headquartered in Silicon Valley in the period - first quarter 2008 until second quarter 2012, which includes the period of the Great Recession - December 2007 to June 2009. We find that during the financial crisis both Silicon Valley and Hollywood banks suffered but Silicon Valley banks much less than Hollywood banks. After the recession, banks in both regions improved performance again Silicon Valley banks recovering faster. We also find that the level of deposits, the leverage ratio and total loan charge-offs consistently play a role in the performance of banks.

JEL: G20, G21

KEYWORDSs: Bank Performance, Hollywood Banks, Silicon Valley Banks, Financial Crisis

INTRODUCTION

Recently, Boudreau (2012) reported on the forthcoming merger between Lucasfilm and Disney and its effects on the apparent difference in business attitude and hostility between Silicon Valley and Hollywood. Boudreau (2012) emphasizes that the conflict between Silicon Valley and Hollywood is mainly due to the difference in business model used. Historically Silicon Valley has been driven by the "disruptive technology" entrepreneurship spirit of internet video and audio file sharing for free which is in direct conflict with the old established business model of Hollywood. Boudreau (2012) suggests that with the acquisition of Lucasfilm by Disney, which is one of the major Hollywood players, the differences between Hollywood and Silicon Valley will disappear and both regions will get more and more integrated.

In this study we address the question – is Silicon Valley as a region that much different from Hollywood as a region? We focus on one particular finance related aspect in those two regions - bank performance. We examine the performance of banks headquartered in Hollywood and banks headquartered in Silicon Valley during the recent recession.

We focus only on Hollywood and Silicon Valley because outside of those two regions California is the same – rural and agricultural. Since the nature of the regions outside of Hollywood and Silicon Valley is the same they would not contribute to the analysis on the differences between the two regions, if they exist. The National Bureau of Economic Research (NBER) identifies December 2007 to June 2009 as the period of the most recent recession.

We find that Silicon Valley banks have a consistently higher ROE throughout the examined period which includes two periods during and after the recession relative to Hollywood banks. Hollywood banks on the other hand have higher ROA only in the last two quarters of the examined period the rest of the time Silicon Valley banks consistently have higher ROA. We also find that the level of deposits, the leverage ratio and total loan charge-offs consistently play a role in the performance of banks.

The paper is organized as follows: in the next section we examine the existing relevant literature. Then, we describe the data and methodology used in the study, followed by a results section discussing our findings. Concluding remarks are offered at the end of the paper.

LITERATURE REVIEW

Most studies examine bank performance around the time of the implementation of the Riegel-Neal Interstate Banking and Branching Efficiency Act of 1994, which became effective in 1997. This act allows for expansion of bank operations across state lines and adds to bank performance through diversification. This naturally has had an influence on bank performance. Levonian (1994) studies the benefits of diversification in the Twelfth Federal Reserve District. His correlation analysis of bank returns in the district suggests that there has been a potential for diversification.

Rose (1996) study the accelerated diversification of banks due to the passage of the Riegel-Neal Interstate Banking and Branching Efficiency Act of 1994. Contrary to the anticipated benefits of diversification the author finds increased risk levels of firms engaged in interstate banking. Rose suggests that if a bank operates in three or more Federal Reserve Bank districts it would experience lower insolvency probability and lower volatility of return on equity (ROE). Rose also uses correlation analysis and documents lowest correlation ratios among small and medium sized banks, which suggests that they would benefit the most from the passage of the Riegel-Neal Act. He also finds that larger banks have high correlation coefficients which he interprets as indicating lower diversification benefits if combined. In contrast to Rose (1996) findings Shiers (2002) finds that economic and geographic diversification reduce bank risk. Naturally, the Shiers study is based on a later period sample.

Zou, Miller and Malamud (2011) find evidence in support of the Rose (1996) findings that small banks experience decrease in risk levels due to interstate diversification. Zou, Miller and Malamud document that medium-sized banks experience increase in risk levels due to the passage of the Riegel-Neal Act. They document mixed results for large banks. They also examine bank performance and document that small and medium sized banks' performance is related to state level macro variables. Also, that large bank performance is not related to state level macro variables.

Clark-Neely and Wheelock (1997) examine the factors affecting bank performance across states. They find that bank earnings are consistently related to the local intra-state business climate and to a lesser extent to the national economy and inter-state business climate.

Other studies examine bank performance internationally, such as Megginson, Nash and Van Randenborgh (1994), Tadesse (2002), Barth, et al. (2003), Williams (2003), Bonin, Hasan and (2005), Beccalli (2007) and Altunbaş and Marqués (2008).

The Federal Reserve Bank of San Francisco provides studies of bank performance in the state of California but not in the micro regions of California. This paper attempts to fill this void in the literature. Zimmerman (1996) provides a study on the performance of California community banks. He finds that community banks in California underperform relative to large state banks due to the local market focus – such as real estate and building conditions. Therefore, to the best of our knowledge this is the first study to examine bank performance during the recent crisis in Silicon Valley and Hollywood as sub-regions of California.

DATA AND METHODOLOGY

The data used in this study are quarterly and are obtained from the Federal Deposit Insurance Corporation's website, http://www2.fdic.gov/idasp/main.asp, for the period first quarter 2008 until second

quarter 2012. The Federal Deposit Insurance Corporation collects detailed accounting data on all banking institutions in the US. The S&P/Case-Shiller US National Index is from www.standardandpoors.com and the vacancy rate in California is from www.census.gov. The S&P/Case-Shiller US National Index tracks residential real estate prices in the United States. There are 48 unique banks and 706 bank-quarter observations in the Hollywood sample. There are 39 unique banks and 625 bank-quarter observations in the Silicon Valley sample.

Similar to Goldberg and Rai (1996), Berger, et al. (2000), Cebenoyan and Strahan (2004), Hernando and Nieto (2007) and Hassan Al-Tamimi (2010), we use return on equity (ROE) and return on total assets (ROA) as measures of bank performance. We consider the following cities as representing Hollywood - Los Angeles, Burbank, Beverly Hills, West Hollywood, Culver City and Santa Monica. We consider the following cities as representing Silicon Valley – Atherton, Berkeley, Campbell, Cupertino, Emeryville, Hayward, Hillsborough, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Morgan Hill, Palo Alto, Pleasanton, San Carlos, San Jose, Santa Clara, San Leandro, San Rafael, San Ramon, Saratoga, Sunnyvale, East Palo Alto, Foster City, Fremont, Menlo Park, Monterey, Newark, Portola Valley, Redwood City, Santa Cruz, Scotts Valley, South San Francisco and Woodside. Surprisingly San Francisco is not considered part of Silicon Valley.

We use univariate and multivariate analyses to examine the performance of Hollywood and Silicon Valley banks. We use multivariate analysis to examine what are possible factors for the difference of bank performance in Hollywood and Silicon Valley. The multivariate analysis model that we use in this study is as follows:

$$P_{i,q} = \beta_0 + \beta_1 LDEP_q + \beta_2 OFFDOM_q + \beta_3 SMALLBANK_q + \beta_4 MEDIUMBANK_q + \quad (1)$$
$$+ \beta_5 LARGEBANK_q + \beta_6 INSSAVE_q + \beta_7 DR_q + \beta_8 CRISIS_q + \beta_9 CS\_US_q + \beta_{10} CA\_VR_q ,$$
$$+ \beta_{11} DRLNLS_q + \beta_{12} DRRE_q + \beta_{13} DRCI_q + \beta_{14} DRCRCD_q + \beta_{15} DRAUTO_q + \varepsilon_q$$

where $P_{i,q}$ is the performance measure, ROE or ROA for bank i in quarter q, $ldep_q$ is natural logarithm of total bank deposits, $offdom_q$ is the number of domestic offices, $smallbanks_q$ have assets up to $100 million, $mediumbanks_q$ have assets between $300 million and $1 billion, $largebanks_q$ have assets exceeding $15 billion, $inssave_q$ is insured savings institution, dr_q is debt ratio, crisis is a dummy variable with value of one during the period of the recession First Quarter 2008 to Second Quarter 2009 and zero

Figure 1: Temporal Behavior of ROE and ROA

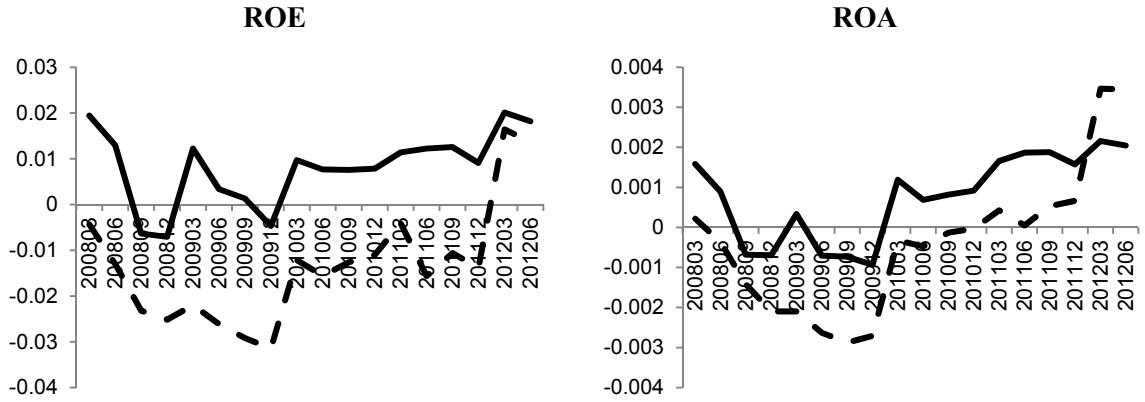

Figure 1 presents the quarterly temporal behavior of performance measures – ROE and ROA. Note: Solid line – Silicon Valley Banks, Dashed line Hollywood Banks.

otherwise, Cs_us_q is the rate of change of the Case-Shiller US Index and ca_vr_q is the vacancy rate in California in quarter q. Drlnls is total bank charge-offs, drre is loan secured by real estate charge-offs, drci is commercial loan charge-offs, drcrcd is credit card loan charge-offs, drauto is auto loan charge-offs and ε_q is the error term.

RESULTS

Figure 1 displays the temporal behavior of ROE and ROA of Silicon Valley and Hollywood banks. Silicon Valley banks have a higher ROE both during and after the recession than Hollywood banks. Hollywood banks exhibit higher levels of ROA only in the last two quarters of the examined period.

Table 1 provides descriptive statistics of the performance measures, ROE and ROA, and of the additional variables used in the analysis. The table clearly indicates higher levels of ROE and ROA for Silicon Valley banks. The table also shows that Silicon Valley banks on average have higher levels of deposits than Hollywood banks.

Table 1: Descriptive Statistics

Panel A: During the Recession, First Quarter 2008 until Second Quarter 2009										
	Silicon Valley Banks					**Hollywood Banks**				
	N	**Mean**	**Std Dev**	**Min**	**Max**	**N**	**Mean**	**Std Dev**	**Min**	**Max**
dep (‘000)	221	1,797	7,131	1	56,020	251	1,274	2,373	0.501	14,856
offdom	221	10.42	23.56	1	132	251	11.78	16.93	1	68
dr	221	0.87	0.09	0.08	0.99	245	0.83	0.19	0.06	0.98
asset (‘000)	221	3,201	14,227	21	102,826	251	1,770	3,175	22,887	17,330
eq (‘000)	221	709	3,770	2	23,657	245	213	367	4	1,711
ni	221	47,594	338,586	-245,912	2,901,718	245	-3,904	45,748	-395,853	163,363
roa	221	0	0.01	-0.04	0.02	245	0	0.01	-0.0454	0.02485
roe	221	0.01	0.06	-0.53	0.12	245	-0.02	0.08	-0.65	0.050375
drlnls	221	64,519	398,180	0	3,766,597	245	11,429	34,566	0	369,264
drre	221	665	2,377	0	19,699	245	8,841	32,901	0	367,325
drci	221	8,391	48,451	0	439,761	245	2,396	5,612	-4	44,198
drcrcd	221	51,834	345,295	0	3,288,971	245	12	53	0	402
drauto	0	0	0	0	0	0	0	0	0	0
Panel B: After the Recession, Third Quarter 2009 until Second Quarter 2012										
	Silicon Valley Banks					**Hollywood Banks**				
	N	**Mean**	**Std Dev**	**Min**	**Max**	**N**	**Mean**	**Std Dev**	**Min**	**Max**
dep (‘000)	404	2,260	7,809	0	51,549	455	1,448	3,250	0	21,222
offdom	404	10.92	26.09	1	131	455	11.6	18.36	1	87
dr	404	0.87	0.09	0.04	0.97	443	0.83	0.17	0.007683	0.98
asset (‘000)	404	4,694	20,558	25	146,310	455	1,871	3,892	39	24,418
eq (‘000)	404	828	4,144	4	27,940	443	265	481	0.732	2,348
ni	404	49,894	335,459	-426,217	3,947,252	443	4,515	34,389	-137,993	201,915
roa	404	0	0	-0.02	0.02	443	0	0.01	-0.03165	0.03
roe	404	0.01	0.03	-0.2	0.08	443	-0.01	0.06	-0.39055	0.2
drlnls	404	184,159	1,255,795	0	15,000,577	443	15,297	34,423	0	289,440
drre	404	1,576	4,477	0	40,310	443	10,971	26,703	0	287,729
drci	404	15,447	104,290	0	1,053,744	443	3,956	10,115	-4	99,985
drcrcd	404	164,218	1,149,204	0	13,863,783	443	16	73	0	657
drauto	193	469.26	2221.23	0	16,943	222	11.26	53.29	0	496

Table 1 provides descriptive statistics of the performance measures, ROE and ROA, and of the additional variables used in the analysis. Dep is total bank deposits ($), offdom is the number of domestic offices. Dr is debt ratio (%). Assets is total assets ($), eq is total shareholders’ equity ($), ni is net income ($), roa is return on assets (%), roe is return on equity (%). Drlnls is total bank charge-offs, drre is loan secured by real estate charge-offs, drci is commercial loan charge-offs, drcrcd is credit card loan charge-offs, drauto is auto loan charge-offs. Descriptive statistics are over the period first quarter of 2008 until second quarter of 2009.

Silicon Valley banks have an average level of deposits during the recession of $1,797,175 whereas Hollywood banks average $1,274,259 even though Hollywood banks have a higher number of domestic offices. After the recession Silicon Valley banks are still bigger with $2,260,410 in deposits whereas Hollywood banks have $1,448,456 in deposits. Silicon Valley banks also have higher net income than Hollywood banks during and after the recession. Silicon Valley banks have positive net income during and after the recession of $47,594 and $49,893, respectively. Whereas, Hollywood banks suffer losses during the recession of $-3,904 but recover after the recession to average net income of $4,514.

Some parameters that indicate that Hollywood banks perform better than Silicon Valley banks are leverage, total loan charge-offs, commercial and credit card loans. Hollywood banks have an average debt ratio of 83%, whereas Silicon Valley banks have a higher debt ratio of 87%. During the recession Silicon Valley banks have average total loan charge-offs of $64,519.34 and Hollywood banks have $11,428.67. After the recession, Silicon Valley banks still have higher levels of loan charge-offs of $184,158.9 and Hollywood banks of $15,297.16.

A more detailed analysis of the total loan charge-off components reveals that during the recession Silicon Valley banks have written-off less real estate loans, $664.91, than Hollywood banks, $8,840.94, but more commercial and credit card loans, $8,390.81 and $51,834.03, respectively. Hollywood banks have written-off during the recession only $5,611.88 and $53.1383, respectively. After the recession the loan write-off pattern of higher real estate write-offs for Hollywood banks and higher commercial and credit card loan write-offs for Silicon Valley banks remains.

Table 2: Independent Variables Correlation Table

	ldep	off dom	small bank	medi bank	large bank	ins save	dr	hw	cs_us	drlnls	drre	drci	dr crcd
off dom	0.48	1											
small bank	-0.38	-0.17	1										
medium bank	-0.32	-0.27	-0.27	1									
large bank	0.43	0.19	-0.07	-0.13	1								
ins save	-0.06	-0.06	-0.07	0.22	-0.05	1							
dr	0.57	0.10	-0.07	-0.01	0.00	-0.01	1						
hw	0.03	0.02	-0.15	-0.16	-0.04	-0.05	-0.13	1					
cs_us	0.02	0.01	-0.04	0.03	0.01	0.00	0.01	0.00	1				
drlnls	0.26	-0.02	-0.04	-0.07	0.50	-0.02	-0.04	-0.09	0.01	1			
drre	0.33	0.30	-0.11	-0.18	0.08	0.10	0.09	0.21	0.02	0.01	1		
drci	0.29	0.00	-0.05	-0.09	0.51	-0.04	-0.03	-0.08	0.02	0.95	0.03	1	
dr crcd	0.24	-0.03	-0.04	-0.06	0.49	-0.03	-0.04	-0.09	0.01	1.00	-0.02	0.93	1
dr auto	0.13	0.17	0.05	0.00	-0.03	-0.04	-0.38	-0.15	-0.03	-0.01	0.00	-0.01	-0.02

Table 2 reports the correlation coefficients among the independent variables used in the analysis. ldep is natural logarithm of total bank deposits and offdom is the number of domestic offices, dr is debt ratio. Small banks have assets up to $100 million, medium banks have assets between $300 million and $1 billion, and large banks have assets exceeding $15 billion. Inssave is insured savings institution. Hw is a dummy variable with value of one for Hollywood Banks and zero otherwise. Cs_us is the rate of change of the Case-Shiller US Index. Drlnls is total bank charge-offs, drre is loan secured by real estate charge-offs, drci is commercial loan charge-offs, drcrcd is credit card loan charge-offs, drauto is auto loan charge-offs.

Naturally, one might argue that the higher levels of loan charge-offs by Silicon Valley banks might be interpreted as prudent banking, whereas the fact that Hollywood banks have lower levels of charge-offs might be interpreted as not as prudent banking. One might argue that it is better for a business to absorb losses once they have realized that they have made a mistake and not to wait too long to acknowledge that a mistake has been made. Maybe this is why Silicon Valley banks on average have better performance than Hollywood banks as presented in Figure 1.

The univariate analysis is informative but does not allow us to make inference on the factors causing the different levels of performance and does not allow for interaction of the possible factors influencing bank performance. That is why we also perform multivariate analysis. Before we do this though, we examine the correlation among the variables to identify potential multicollinearity issues which might weaken the results and conclusions of the multivariate analysis.

Table 2 reports correlation coefficients among the independent variables. The table shows that potential problems might exist if total charge-offs are combined with commercial and credit card charge-offs due to the correlation coefficients of above 0.9. Therefore, in the analysis that follows we use different model specifications to allow for the potential multicollinearity issues and to check for stability in the results.

Table 3 presents multivariate regression results based on equation 1. Panel A shows the level of deposits, leverage ratio and total loan charge-offs consistently play a role in bank performance. The larger the level of deposits the higher the bank performance. The higher the debt ratio and loan charge-offs the lower the bank performance. The results in Panel B indicate the level of deposits, the leverage ratio for Hollywood banks only and total loan charge-off components consistently play a role in bank performance.

Table 3: Regression Results

Panel A: Total Charge Offs								
	ROE				**ROA**			
	SV		**HW**		**SV**		**HW**	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**Coeff**	**p-value**
Intercept	-0.0249	0.6605	0.2316**	0.0179	0.0071	0.1703	0.0084	0.3011
ldep	0.0155***	<.0001	0.0161**	0.0105	0.0017***	<.0001	0.0017***	0.0013
offdom	0.0004***	0.0002	0.0004	0.2132	0.0001***	0.0062	0.0001	0.2052
smallbank	0.0037	0.7084	-0.0719***	0.0002	-0.0001	0.9073	-0.0065***	<.0001
mediumbank	0.0169***	0.0098	-0.0002	0.9825	0.0012**	0.0376	-0.0001	0.9495
largebank	-0.0090	0.5978	0.0050	0.8062	0.0002	0.8728	-0.0003	0.8417
inssave	-0.0118	0.1673	0.0056	0.6842	-0.0014*	0.0798	0.0002	0.8449
dr	-0.1359***	0.0004	-0.3771***	<.0001	-0.0241***	<.0001	-0.0195***	0.0001
crisis	-0.0039	0.4117	-0.0152	0.0356	-0.0007	0.1311	-0.0018***	0.0022
cs_us	0.0286	0.5975	0.0662	0.4157	-0.0006	0.8981	0.0067	0.3173
ca_vr	-0.2354	0.2905	-0.2663	0.4300	-0.0337*	0.0951	-0.0529	0.0587
ldrlnls	-0.0058***	<.0001	-0.0146***	<.0001	-0.0007***	<.0001	-0.0014***	<.0001
Adj R-sq		0.1623		0.2775		0.2348		0.3043
N		502		494		502		494
Panel B: Charge-Off Components								
	ROE				**ROA**			
	SV		**HW**		**SV**		**HW**	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**
Intercept	-0.1298***	0.0936	0.7846***	<.0001	-0.0152*	0.0726	0.0382***	0.0013
ldep	0.0191***	<.0001	0.0159**	0.0350	0.0019***	<.0001	0.0019***	0.0018
offdom	0.0003***	0.0001	0.0007*	0.0671	0.0001**	0.0318	0.0001	0.1460
smallbank	-0.0144	0.1581	-0.1250***	<.0001	-0.0019*	0.0932	-0.0091***	<.0001
mediumbank	0.0048	0.3709	-0.0033	0.8175	0.0003	0.6574	-0.0002	0.8963
largebank	-0.0148	0.4243	0.0049	0.8102	-0.0029	0.1548	-0.0004	0.8058
inssave			0.0303*	0.0932			0.0023	0.1278
dr	-0.0444	0.5498	-1.0358***	<.0001	0.0003	0.9732	-0.0595***	<.0001
crisis	0.0001	0.9748	-0.0150	0.1029	-0.0004	0.4492	-0.0017	0.0209
cs_us	0.0127	0.7882	0.0299	0.7462	-0.0006	0.9096	0.0046	0.5481
ca_vr	-0.1244	0.5181	0.0979	0.8066	-0.0359*	0.0883	-0.0337	0.3049
ldrre	-0.0048***	0.0001	-0.0156***	<.0001	-0.0005***	0.0001	-0.0013***	<.0001
ldrci	-0.0064***	<.0001	0.0001	0.9591	-0.0007***	<.0001	-0.0002	0.3532
Adj. R-sq		0.4688		0.4363		0.3965		0.4017
N		254		362		254		362

Table 3 presents multivariate analysis results based on regression equation (1). Ldep *is natural logarithm of total bank deposits and offdom is the number of domestic offices, dr is debt ratio. Small banks have assets up to $100 million, medium banks have assets between $300 million and $1 billion, and large banks have assets exceeding $15 billion. INSSAVE is insured savings institution. Dr is the debt ratio and crisis is a dummy variable with one representing the recession and zero otherwise. Cs_us is the rate of change of the Case-Shiller US Index and ca_vr is the vacancy rate in California. Ldrlnls is the log of total bank charge-offs, ldrre is the log of loan secured by real estate charge-offs, ldrci is the log of commercial loan charge-offs. Significant difference from zero at the 10%, 5% and 1% level is denoted with *, ** and ***, respectively.*

Analysis based on the combined samples of Silicon Valley and Hollywood banks and loan charge-off components indicates that Hollywood banks consistently underperform Silicon Valley banks and that small banks have lower levels of performance and the higher the level of deposits the higher the performance of banks. These results are presented in Table 4. Debt ratios again are significantly negatively related to bank performance and so are total loan charge-offs and real estate and commercial loan charge-offs.

Table 4: Regression Results – Combined Dataset and Detailed Loan Charge-Offs

	ROE		ROA		ROE		ROA	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**
Intercept	0.1181**	0.0219	0.0094**	0.0312	0.6455***	<.0001	0.0330***	<.0001
ldep	0.0170***	<.0001	0.0018***	<.0001	0.0162***	<.0001	0.0018***	<.0001
offdom	0.0004***	0.0002	0.0000**	0.0318	0.0005***	<.0001	0.0000***	0.0005
smallbank	-0.0262***	0.0051	-0.0026***	0.0013	-0.0752***	<.0001	-0.0059***	<.0001
mediumbank	0.0052	0.3833	0.0003	0.4939	-0.0042	0.5782	-0.0003	0.6496
largebank	-0.0015	0.9015	0.0005	0.6091	0.0078	0.5803	-0.0001	0.9192
inssave	-0.0125	0.1044	-0.0009	0.1635	0.0190	0.2060	0.0014	0.2523
dr	-0.2680***	<.0001	-0.0242***	<.0001	-0.8375***	<.0001	-0.0492***	<.0001
crisis	-0.0110**	0.0123	-0.0013***	0.0005	-0.0126**	0.0286	-0.0014***	0.0051
cs_us	0.0352	0.4788	0.0020	0.6432	0.0026	0.9662	0.0012	0.8142
ca_vr	-0.2714	0.1836	-0.0467***	0.0072	-0.0195	0.9386	-0.0362*	0.0891
ldrlnls	-0.0107***	<.0001	-0.0010***	<.0001				
ldrre					-0.0122***	<.0001	-0.0010***	<.0001
ldrci					-0.0025*	0.0932	-0.0004***	0.0013
HW	-0.0288***	<.0001	-0.0027***	<.0001	-0.0408***	<.0001	-0.0028***	<.0001
Adj R-sq		0.2557		0.3001		0.4276		0.4056
N		996		996		616		616

*Table 4 presents regression results based on combined dataset and detailed loan charge-offs.ldep is natural logarithm of total bank deposits and offdom is the number of domestic offices, dr is debt ratio. Small banks have assets up to $100 million, medium banks have assets between $300 million and $1 billion, and large banks have assets exceeding $15 billion. INSSAVE is insured savings institution. Dr is the debt ratio and crisis is a dummy variable with one representing the recession and zero otherwise. Cs_us is the rate of change of the Case-Shiller US Index and ca_vr is the vacancy rate in California. Ldrlnls is the log of total bank charge-offs, ldrre is the log of loan secured by real estate charge-offs, ldrci is the log of commercial loan charge-offs. HW is a dummy variable with value of one for banks headquartered in Hollywood and zero for Silicon Valley banks. Significant difference from zero at the 10%, 5% and 1% level is denoted with *, ** and ***, respectively.*

As robustness tests we repeat the regression analysis with the loan charge-offs scaled by the total amount of bank deposits. The regression results by region are presented in Table 5. Panel A presents results for total scaled loan charge-offs, whereas Panel B presents results for the components of the scaled total charge-offs – scaled real estate charge-offs and scaled commercial loan charge-offs. The results are similar to the non-scaled parameters.

Table 6 reports regression results for the combined data sets of both regions but with parameters scaled by bank deposits. The results are similar to the non-scaled factor regressions.

CONCLUDING COMMENTS

In this study we examine the performance of banks headquartered in Hollywood and banks headquartered in Silicon Valley during the recent recession. We use return on equity (ROE) and return on total assets (ROA) as measures of bank performance to compare the two regions in California. We use univariate and multivariate analyses to examine the performance of banks in these regions in the period - first quarter 2008 until second quarter 2012, which includes the period of the Great Recession - December 2007 to June 2009.

Table 5: Regression Results

Panel A: Total Charge-Offs, Scaled by Total Deposits								
	ROE				**ROA**			
	SV		**HW**		**SV**		**HW**	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**
Intercept	-0.0342	0.4077	-0.0041	0.8478	-0.013***	0.0031	0.0307***	<.0001
ldep	0.0081***	0.0077	0.00936***	<.0001	0.00108***	0.0009	-0.0021***	<.0001
offdom	0.0004***	0.0001	-0.0002	0.1983	0.0001	0.2137	0.0001***	<.0001
smallbank	0.00048	0.9534	-0.0355***	<.0001	-0.001	0.2353	-0.0109***	<.0001
mediumbank	0.0167***	0.0034	-0.0057	0.2718	0.00165***	0.0065	-0.0054***	<.0001
largebank	0.0082	0.6018	-0.0039	0.7925	0.00171	0.3073	-0.0013	0.4248
inssave	-0.0035	0.5822	0.00644	0.4001	0.00038	0.5756	-0.0003	0.7136
dr	-0.0531**	0.0304	-0.0949***	<.0001	0.00359	0.1669	0.00376	0.1248
crisis	-0.0032	0.4180	-0.0211***	<.0001	-0.0009**	0.0398	-0.0024***	<.0001
cs_us	-0.0055	0.9047	-0.032	0.5311	-0.005	0.3045	-0.0017	0.7717
ca_vr	-0.3103*	0.0995	-0.1037	0.6204	-0.0488**	0.0146	-0.0563**	0.0175
sdrlnls	-0.2553***	0.0002	-3.2673***	<.0001	-0.0193***	0.0069	-0.2718***	<.0001
Adj. R-sq		0.1486		0.4944		0.2123		0.5078
N		622		687		622		687
Panel B: Charge-Off Components, Scaled by Total Deposits								
	ROE				**ROA**			
	SV		**HW**		**SV**		**HW**	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**
Intercept	-0.0856**	0.0306	-0.0106	0.6225	-0.0193***	<.0001	0.03031***	<.0001
ldep	0.0091***	0.0013	0.01067***	<.0001	0.00129***	<.0001	-0.002***	<.0001
offdom	0.0003***	0.0006	-0.0002	0.1783	0.0000	0.7025	0.00011***	<.0001
smallbank	0.00241	0.7580	-0.0353***	<.0001	-0.0007	0.3989	-0.011***	<.0001
mediumbank	0.01626***	0.0026	-0.0036	0.4892	0.00168***	0.0033	-0.0053***	<.0001
largebank	-0.0084	0.5654	-0.0065	0.6594	0.00042	0.7864	-0.0013	0.4247
inssave	-0.0059	0.3294	0.00919	0.2395	0.0001	0.9259	-0.0004	0.6881
dr	-0.0139	0.5345	-0.1093***	<.0001	0.00695***	0.0035	0.00308	0.217
crisis	-0.0077**	0.0426	-0.0199***	<.0001	-0.0013***	0.0014	-0.0023***	<.0001
cs_us	-0.0163	0.7043	-0.0316	0.5365	-0.006	0.1889	-0.0015	0.7977
ca_vr	-0.1252	0.479	-0.1161	0.5821	-0.0252	0.1786	-0.0551**	0.0217
sdrre	-2.7289***	<.0001	-3.5647***	<.0001	-0.255***	<.0001	-0.2694***	<.0001
sdrci	-2.0655***	<.0001	-2.3968***	<.0001	-0.2635***	<.0001	-0.2775***	<.0001
Adj. R-sq		0.2582		0.4909		0.3139		0.4992
N		622		687		622		687

*Table 5 presents robustness test results based on scaled factors. Ldep is natural logarithm of total bank deposits and offdom is the number of domestic offices, dr is debt ratio. Small banks have assets up to $100 million, medium banks have assets between $300 million and $1 billion, and large banks have assets exceeding $15 billion. INSSAVE is insured savings institution. Dr is the debt ratio and crisis is a dummy variable with one representing the recession and zero otherwise. Cs_us is the rate of change of the Case-Shiller US Index and ca_vr is the vacancy rate in California. Ldrlnls is the log of total bank charge-offs, ldrre is the log of loan secured by real estate charge-offs, ldrci is the log of commercial loan charge-offs. Significant difference from zero at the 10%, 5% and 1% level is denoted with *, ** and ***, respectively.*

We find that Silicon Valley banks have a consistently higher ROE throughout the examined period which includes two periods during and after the recession relative to Hollywood banks. Hollywood banks on the other hand have higher ROA only in the last two quarters of the examined period the rest of the time Silicon Valley banks consistently have higher ROA. We also find that the level of deposits, the leverage ratio and total loan charge-offs consistently play a role in the performance of banks. We suggest that the reason for the better performance of Silicon Valley banks might be due to the fact that they have realized that they have made a mistake prior to the Great Recession by absorbing higher loan charge-offs earlier than Hollywood banks. We base this argument on the age-old wisdom that it is better for a business to absorb losses once the business has realized that they have made a mistake.

A natrual limitation of the study, as mentioned earlier in the paper, is the fact that San Francisco, as a city, is not considered part of Silicon Valley, whereas Los Angeles is part of Hollywood. San Francisco as a world financial center has many banks located there which might have an effect on the results, if included. However, from strictly scientific standpoint adhering to the definitions is vital. Nevertheless, the further investigation of banks headquartered in San Francisco will be conducted by the authors in a future study. Another limitation of the study is the use of quarterly data. There might be vital information lost

due to the quarterly frequency, which might be available if higher frequency data were used, such as monthly or daily. However, as of the writing of the paper only quarterly data were available to the authors. This limitation, of course, can be used as an idea for a future study – re-examination of the research question in this study with higher frequency data.

Table 6: Regression Results – Combined Dataset and Detailed Loan Charge-Offs, Scaled by Total Deposits

	ROE		ROA		ROE		ROA	
	coeff	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**	**coeff**	**p-value**
Intercept	0.0504***	0.0083	0.0274***	<.0001	0.0080	0.6257	0.0234***	<.0001
ldep	0.0086***	<.0001	-0.0009***	<.0001	0.0070***	<.0001	-0.0010***	<.0001
OFFDOM	0.0001	0.5247	0.0000***	0.0004	0.0002***	0.0043	0.0000***	<.0001
smallbank	-0.0186***	0.0015	-0.0079***	<.0001	-0.0210***	<.0001	-0.0081***	<.0001
mediumbank	0.0050	0.2358	-0.0030***	<.0001	0.0009	0.7932	-0.0033***	<.0001
largebank	0.0227**	0.0278	0.0074***	<.0001	-0.0163*	0.0647	0.0045***	<.0001
INSSAVE	-0.0045	0.4290	-0.0002	0.7986	0.0001	0.9865	0.0002	0.7693
dr	-0.1277***	<.0001	-0.0079***	<.0001	-0.0707***	<.0001	-0.0035**	0.0307
crisis	-0.0101***	0.0036	-0.0016***	<.0001	-0.0156***	<.0001	-0.0021***	<.0001
cs_us	-0.0204	0.6085	-0.0034	0.4295	-0.0268	0.4324	-0.0040	0.3147
ca_vr	-0.4002**	0.0139	-0.0764***	<.0001	-0.1263	0.3669	-0.0500***	0.0020
sdrlnls	-0.9253***	<.0001	-0.0669***	<.0001				
sdrre					-3.4298***	<.0001	-0.2748***	<.0001
sdrci					-2.2579***	<.0001	-0.2078***	<.0001
HW	-0.0289***	<.0001	-0.0025	<.0001	-0.0121	<.0001	-0.0011	0.0004
Adj. R-sq		0.2194		0.2686		0.429		0.3935
N		1309		1309		1309		1309

*Table 6 reports regression results for the combined data sets of both regions but with parameters scaled by bank deposits. ldep is natural logarithm of total bank deposits and offdom is the number of domestic offices, dr is debt ratio. Small banks have assets up to $100 million, medium banks have assets between $300 million and $1 billion, and large banks have assets exceeding $15 billion. INSSAVE is insured savings institution. Dr is the debt ratio and crisis is a dummy variable with one representing the recession and zero otherwise. Cs_us is the rate of change of the Case-Shiller US Index and ca_vr is the vacancy rate in California. Ldrlnls is the log of total bank charge-offs, ldrre is the log of loan secured by real estate charge-offs, ldrci is the log of commercial loan charge-offs. HW is a dummy variable with value of one for banks headquartered in Hollywood and zero for Silicon Valley banks. Significant difference from zero at the 10%, 5% and 1% level is denoted with *, ** and ***, respectively.*

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